SEQUENCE LISTING

SEQ ID NO: 1

LENGIH: 1447

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TYPE: nucleic acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: DNA

SEQUENCE DESCRIPTION:

GANTICCOCG AACGANTAAT TATTATTAGC AATTATTAGC GATCAATAAT CITGATCACA TI 62 ATG CCA ACC ACT ATT AAG CAA CCA TTA TCA GTG GTG ACT CAA CAC CAG 110 TOC TIG TIT GAG TGT GCC TAC GGA TOG CCC CAC CTT GCA AAG ACA GAA 158 ATG ACA CCC TCC TCT TCC AGT GAA TAT GGG CAA ACA TCA AAG ATG AGC 206 COG COC GIT COC CAG CAG GAC TOG TITA TCA CAG COC COG GOC AGA GIT 254 ACC ATT AAG ATG GAG TGT AAC CCA AAC CAG GIT AAT GGG TCA AGG AAT 302 TCA CCT GAT GAC TGC AGC GIG GCA AAA GGA GGG AAA ATG GTT AGC AGT 350 TCA GAC AAT GIT GGG ATG AAC TAT GGA AGC TAC ATG GAA GAG AAG CAT 398 ATT CCG CCT CCA AAT ATG ACA ACC AAT GAA CGA AGA GIT ATT GIG CCA 446 GCA GAT CCT ACG TTA TGG AGC ACA GAC CAT GTA CGG CAG TGG CTG GAG 494 TOG OCA GIG AAG CAG TAT OGT CIT OCA CAC GIG CAC ATC TIG TIG TIC 542 CAG AAC ATT GAT GGG AAA GAG TIG TGT AAA ATG ACC AAA GAT GAC TIC 590 CAG AGA CIC ACG COG AGC TAT AAC CCA GAT AIC CIC CIG TCA CAC CITÁ 638 CAC TAC CTC AGA GAG AGA GGA GCC ACT TIT ATT TIT CCA AAT ACA TCA 686 GIT TIAC CCA GAA GCA ACG CAA ACA ATA ACA ACA AGG CCA GAT TITA CCT 734 TAT GAG CAA GOG AGG AGA TCA GOG TGG AGG AGT CAC AGC CAT COC ACT 782 CAG TCA AAA GCT ACC CAA CCA TCA TCT TCA ACA GTG CCC AAA ACA GAA 830 CAC CAG CGT CCT CAG TTA GAT CCT TAT CAG ATT CTT GGA COG ACC AGC 878

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AGC	CCT	CTT	GCA	AAT	CCA	œ	AGT	œ	CAG	ATA	CAG	CIA	TGG	CAG	TTC	926
CIA	CIG	GAG	CIT	CIG	TCG	GAC	AGC	TCC	AAC	TCC	AAC	TCC	ATC	ACC	TGG	974
GAG	œ	ACA	AAT	œ	GAG	TTC	AAG	AIG	ACA	GAC	CCT	CAT	GAA.	GIG	GCT	1022
œ	CCT	TGG	AEDD	GAG	AGG	AAA	AGC	AAA	ccī	AAC	ATG	AAC	TAT	GAC	AAA	1070
CIC	AGC	ŒŢ	GCA	CIT	œ	TAC	TAC	TAT	GAC	AAA	AAT	TTA	ATG	ACT	AAA	1118
GIT	CAT	ŒŢ	AAA	œ	TAT	∞	TAC	AAA	TIT	CAT	TTC	CAC	ÆĐĐ	AIC	CT	1166
CAG	œc	CIC	CAG	ccr	CAC	CT	CCA	GAA.	TCA	TCC	ATG	TAC	AAA	TAC	CCA	1214
ICA	GAC	CIC	∞	TAC	ATG	AGT	TCC	TAC	CAT	GCA	CAC	∞	CAG	AAG	ATG	1262
AAC	TTT	GIA	CT	∞	CAT	∞	CCT	CT	TIG	∞	GIA	ACC	TCA	TCC	AGC	1310
ITT	TTT	CT	œc	CCT	TAA	CCA	TAC	TGG	TAA	TCA	CCA	ACT	GGA.	œ	ATC	1358
IAC	ccc	TAA	ACC	AGG	CIG	CCA	CT	CT	CAT	ATG	CCT	TCC	CAT	CIT	œc	1406
ACC	TAC	TAC	TAA	GIG	GGG7	VAACT	AAA (WW	XXX	'A AC	ZAAAZ	A				1447

SEQ ID NO: 2

LENGIH: 451

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

Met Ala Ser Thr Ile Lys Glu Ala Leu Ser Val Val Ser Glu Asp Gln 16 Ser Leu Phe Glu Cys Ala Tyr Gly Ser Pro His Leu Ala Lys Thr Glu 32 Met Thr Ala Ser Ser Ser Ser Glu Tyr Gly Gln Thr Ser Lys Met Ser 48 Pro Arg Val Pro Gln Gln Asp Trp Leu Ser Gln Pro Pro Ala Arg Val 64

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Thr-Ile Lys Met Glu Cys Asn Pro Asn Gln Val Asn Gly Ser Arg Asn	80
Ser Pro Asp Asp Cys Ser Val Ala Lys Gly Gly Lys Met Val Ser Ser	96
Ser Asp Asn Val Gly Met Asn Tyr Gly Ser Tyr Met Glu Glu Lys His	112
Ile Pro Pro Pro Asn Met Thr Thr Asn Glu Arg Arg Val Ile Val Pro	128
Ala Asp Pro Thr Leu Trp Ser Thr Asp His Val Arg Gln Trp Leu Glu	144
Trp Ala Val Lys Glu Tyr Gly Leu Pro Asp Val Asp Ile Leu Leu Phe	160
Gln Asn Ile Asp Gly Lys Glu Leu Cys Lys Met Thr Lys Asp Asp Phe	176
Gln Arg Leu Thr Pro Ser Tyr Asn Ala Asp Ile Leu Leu Ser His Leu	192
His Tyr Leu Arg Glu Arg Gly Ala Thr Phe Ile Phe Pro Asn Thr Ser	208
Val Tyr Pro Glu Ala Thr Gln Arg Ile Thr Thr Arg Pro Asp Leu Pro	224
Tyr Glu Gln Ala Arg Arg Ser Ala Trp Thr Ser His Ser His Pro Thr	240
Gln Ser Lys Ala Thr Gln Pro Ser Ser Ser Thr Val Pro Lys Thr Glu	256
Asp Gln Arg Pro Gln Leu Asp Pro Tyr Gln Ile Leu Gly Pro Thr Ser	272
Ser Arg Leu Ala Asn Pro Gly Ser Gly Gln Ile Gln Leu Trp Gln Phe	288
Leu Leu Glu Leu Leu Ser Asp Ser Ser Asn Ser Asn Cys Ile Thr Trp	304
Glu Gly Thr Asn Gly Glu Phe Lys Met Thr Asp Pro Asp Glu Val Ala	320
Arg Arg Trp Gly Glu Arg Lys Ser Lys Pro Asn Met Asn Tyr Asp Lys	336
Leu Ser Arg Ala Leu Arg Tyr Tyr Tyr Asp Lys Asn Ile Met Thr Lys	352
Val His Gly Lys Arg Tyr Ala Tyr Lys Phe Asp Phe His Gly Ile Ala	368
Gln Ala Leu Gln Pro His Pro Pro Glu Ser Ser Met Tyr Lys Tyr Pro	384
Ser Asp Leu Pro Tyr Met Ser Ser Tyr His Ala His Pro Gln Lys Met	400
Asn Phe Val Ala Pro His Pro Pro Ala Leu Pro Val Thr Ser Ser Ser	416
Phe Phe Ala Ala Pro Asn Pro Tyr Trp Asn Ser Pro Thr Gly Gly Ile	432
Tyr Pro Asn Thr Arg Leu Pro Ala Ala His Met Pro Ser His Leu Gly	448
Thr Tyr Tyr	451

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SEQ-ID NO: 3

LENGIH: 1528

TYPE: nucleic acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: DNA

SEQUENCE DESCRIPTION:

GAA1	TCC	90G <i>I</i>	ACG	VATTAV	T TF	IATTA	TAG	C AAC	LIAT.	ZAGC	CAIC	ZATZ	TA	TIG	NICACA II	62
ATG	GCA	AGC	ACT	ATT	AAG	GAA.	GCA	AIT	TCA	GIG	GIG	AGT	GAA.	GAC	CAG	110
TCC	TIG	TIT	GAG	TGT	œc	TAC	GGA.	TCG	$\alpha \alpha \alpha$	CAC	CIT	GCA	AAG	ACA	CAA)	158
ATG	ACA	œc	TCC	TCT	TCC	AGT	CAA.	TAT	GGG	CAA	ACA	TCA	AAG	ATG	AGC	206
ccc	œ	GIT	∞	CAG	CAG	GAC	TGG	AIT	TCA	CAG	∞	œ	∞	AGA	GIT	254
ACC	TTA	aag	ATG	GAG	TGI	AAC	CCA	AAC	CAG	GIT	TAA	00 0G	TCA	AGG	AAT	302
TCA	CCT	GAT	CAC	TCC	ACC	GIG	GCA.	AAA	GGA.	93G	AAA	AIG	GIT	AGC	AGT	350
TCA	GAC	TAA	GIT	œ	ATG	AAC	TAT	ÆDD	AGC	TAC	ATG	GAA.	GAG	aag	CAT	398
ATT	CCCG	CCT	CCA	TAA	ATG	ACA	ACC	TAA	AAD	CGA	AGA	GIT	ATT	GIG	CCA	446
CCA	TAD	œ	ACG	TTA	TGG	AGC	ACA	GAC	CAT	GIA	œ	CAG	TŒ	CIG	GAG	494
TGG	CCA	GIG	aag	GA G	TAT	ŒT	CIT	CCA	GAC	GIG	GAC	AIC	TIG	TIG	TIC	542
CAG	AAC	TTA	GAT	93 5	aaa	GAG	TTG	TGI	AAA	ATG	ACC	AAA	CAT	GAC	TIC	590
CAG	AGA	CIC	ACG	œ	AGC	TAT	AAC	GCA	GAT.	ATC	CIC	CIG	TCA	CAC	CIA	638
CAC	TAC	CIC	AGA	QAG	ACT	œ	CIT	CCA	CAT	TIG	AČT	TCA	GAT	GAT	GIT	686
GAT	aag	GCC	TIA	CAA	AAC	TCT	CCA	œ	TTA	ATG	CAT	GCT	AGA	AAC	ACA	734
C)C;A	ÆDD	œ	ACT	TTT	TTA	TTT	CCA	AAT	ACA	TCA	GTT	TAC	CCA	GAA.	GCA	782
ACG	CAA	AGA	ATA	ACA	ACA	AGG	CCA	CAT	TTA	CCT	TAT	GAG	CAA	œ	AGG	830

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AGA-TCA GOG TGG ACG AGT CAC AGC CAT COC ACT CAG TCA AAA GCT ACC	878
CAA CCA TCA TCT TCA ACA GTG CCC AAA ACA GAA GAC CAG CGT CCT CAG	926
TIA GAT CCT TAT CAG ATT CIT GGA COG ACC AGC AGC CGT CIT GCA AAT	974
CCA GOG AGT GCG CAG ATA CAG CTA TOG CAG TIC CTA CTG GAG CTT CTG	1022
TOG GAC AGC TOC AAC TOC AAC TGC ATC ACC TGG GAG GGC ACA AAT GGG	1070
CAG TIC AAG ATG ACA CAC CCT CAT CAA CTG CCT CCG CCT TCG CCA CAG	1118
AGG ANA AGC ANA CCT ANC ATG ANC TAT GAC ANA CTC AGC CGT GCA CTT	1166
COC TAC TAC TAT CAC AAA AAT ATT ATG ACT AAA GIT CAT GGT AAA COC	1214
TAT GOO TAC AAA TIT GAT TIC CAC GGA AIC GCT CAG GOO CIC CAG CCT	1262
CAC CCT CCA GAA TCA TCC ATG TAC AAA TAC CCA TCA GAC CTC CCC TAC	1310
ATG AGT TOO TAC CAT GOA CAC COO CAG AAG ATG AAC TIT GITA GOT COO	1358
CAT COC CCT CCT TIG CCC GEA ACC TCA TCC AGC TIT TIT GCT GCC CCT	1406
AAT CCA TAC TOG AAT TCA CCA ACT GGA GGC ATC TAC CCC AAT ACC AGG	1454
CIG CCA GCT GCT CAT ATG CCT TCC CAT CTT GGC ACC TAC TAA GTG	1502
CIG COA GEI GEI CIL IZO GOL	1528

SEQ ID NO: 4

LENGIH: 478

IMPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

SEQUENCE DESCRIPTION:

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Met Ala Ser Thr Ile Lys Glu Ala Leu Ser Val Val Ser Glu Asp Gln

Ser Asp Asn Val Gly Met Asn Tyr Gly Ser Tyr Ret Old Gla Pro Ile Pro Pro Pro Asn Met Thr Thr Asn Glu Arg Arg Val Ile Val Pro Ala Asp Pro Thr Leu Trp Ser Thr Asp His Val Arg Gln Trp Leu Glu Trp Ala Val Lys Glu Tyr Gly Leu Pro Asp Val Asp Ile Leu Leu Phe	2
Pro Arg Val Pro Gln Gln Asp Trp Leu Ser Gln Pro Pro Ala Arg Val Thr Ile Lys Met Glu Cys Asn Pro Asn Gln Val Asn Gly Ser Arg Asn Ser Pro Asp Asp Cys Ser Val Ala Lys Gly Gly Lys Met Val Ser Ser Ser Asp Asn Val Gly Met Asn Tyr Gly Ser Tyr Met Glu Glu Lys His Ile Pro Pro Pro Asn Met Thr Thr Asn Glu Arg Arg Val Ile Val Pro Ala Asp Pro Thr Leu Trp Ser Thr Asp His Val Arg Gln Trp Leu Glu Trp Ala Val Lys Glu Tyr Gly Leu Pro Asp Val Asp Ile Leu Leu Phe	8
Thr Ile Lys Met Glu Cys Asn Pro Asn Gln Val Asn Gly Ser Arg Asn 8 Ser Pro Asp Asp Cys Ser Val Ala Lys Gly Gly Lys Met Val Ser Ser 9 Ser Asp Asn Val Gly Met Asn Tyr Gly Ser Tyr Met Glu Glu Lys His 1 Ile Pro Pro Pro Asn Met Thr Thr Asn Glu Arg Arg Val Ile Val Pro Ala Asp Pro Thr Leu Trp Ser Thr Asp His Val Arg Gln Trp Leu Glu 1 Trp Ala Val Lys Glu Tyr Gly Leu Pro Asp Val Asp Ile Leu Leu Phe 1	4
Ser Pro Asp Asp Cys Ser Val Ala Lys Gly Gly Lys Met Val Ser Ser 9 Ser Asp Asn Val Gly Met Asn Tyr Gly Ser Tyr Met Glu Glu Lys His 1 Ile Pro Pro Pro Asn Met Thr Thr Asn Glu Arg Arg Val Ile Val Pro Ala Asp Pro Thr Leu Trp Ser Thr Asp His Val Arg Gln Trp Leu Glu 1 Trp Ala Val Lys Glu Tyr Gly Leu Pro Asp Val Asp Ile Leu Leu Phe 1	
Ser Pro Asp Asp Cys Ser Val Ala Lys Gly Gly Lys He van Ser Asp Asn Val Gly Met Asn Tyr Gly Ser Tyr Met Glu Glu Lys His I le Pro Pro Pro Asn Met Thr Thr Asn Glu Arg Arg Val I le Val Pro Ala Asp Pro Thr Leu Trp Ser Thr Asp His Val Arg Gln Trp Leu Glu I Trp Ala Val Lys Glu Tyr Gly Leu Pro Asp Val Asp I le Leu Leu Phe	
Ser Asp Asn Val Gly Met Asn Tyr Gly Ser Tyr Ret Old Gla Pro Ile Pro Pro Pro Asn Met Thr Thr Asn Glu Arg Arg Val Ile Val Pro Ala Asp Pro Thr Leu Trp Ser Thr Asp His Val Arg Gln Trp Leu Glu Trp Ala Val Lys Glu Tyr Gly Leu Pro Asp Val Asp Ile Leu Leu Phe	
Ala Asp Pro Thr Leu Trp Ser Thr Asp His Val Arg Gln Trp Leu Glu Trp Ala Val Lys Glu Tyr Gly Leu Pro Asp Val Asp Ile Leu Leu Phe	112
Ala Asp Pro Thr Leu Trp Ser Thr Asp His Val Arg Gln Trp Leu Glu Trp Ala Val Lys Glu Tyr Gly Leu Pro Asp Val Asp Ile Leu Leu Phe	128
Trp Ala Val Lys Glu Tyr Gly Leu Pro Asp Val Asp Ile Leu Leu Phe	144
	160
	176
Gln Arg Leu Thr Pro Ser Tyr Asn Ala Asp Ile Leu Leu Ser His Leu	192
His Tyr Leu Arg Glu Thr Pro Leu Pro His Leu Thr Ser Asp Asp Val	208
Asp Lys Ala Leu Gln Asn Ser Pro Arg Leu Met His Ala Arg Asn Thr	224
Gly Gly Ala Thr Phe Ile Phe Pro Asn Thr Ser Val Tyr Pro Glu Ala	240
Thr Gln Arg Ile Thr Thr Arg Pro Asp Leu Pro Tyr Glu Gln Ala Arg	256
Arg Ser Ala Trp Thr Ser His Ser His Pro Thr Gln Ser Lys Ala Thr	272
	288
Gln Pro Ser Ser Ser Thr Val Pro Lys Thr Glu Asp Gln Arg Pro Gln	304
Leu Asp Pro Tyr Gln Ile Leu Gly Pro Thr Ser Ser Arg Leu Ala Asn	320
Pro Gly Ser Gly Gln Ile Gln Leu Trp Gln Phe Leu Leu Glu Leu Leu	
Ser Asp Ser Ser Asn Ser Asn Cys Ile Thr Trp Glu Gly Thr Asn Gly	336
Glu Phe Lys Met Thr Asp Pro Asp Glu Val Ala Arg Arg Trp Gly Glu	352
Arg Lys Ser Lys Pro Asn Met Asn Tyr Asp Lys Leu Ser Arg Ala Leu	368
Arg Tyr Tyr Tyr Asp Lys Asn Ile Met Thr Lys Val His Pro Pro Glu	384
Ser Ser Met Tyr Lys Tyr Pro Ser Asp Leu Pro Tyr Met Ser Ser Tyr	400
His Gly Lys Arg Tyr Ala Tyr Lys Phe Asp Phe His Gly Ile Ala Gln	416
Ala Leu Gln Pro His Ala His Pro Gln Lys Met Asn Phe Val Ala Pro	432

His Pro Pro Ala Leu Pro Val Thr Ser Ser Ser Phe Phe Ala Ala Pro 448
Asn Pro Tyr Trp Asn Ser Pro Thr Gly Gly Ile Tyr Pro Asn Thr Arg 464
Leu Pro Ala Ala His Met Pro Ser His Leu Gly Thr Tyr Tyr 478

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SEQ ID NO: 5

LENGIH: 23

TYPE: nucleic acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: DNA

SEQUENCE DESCRIPTION:

ATCITGATCA CATTATGCCA AGC 23

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SEQ ID NO: 6

LENGIH: 25

TYPE: nucleic acid

STRANDEDNESS: single

TOPOLOGY: linear

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MOLECULE TYPE: DNA

SEQUENCE DESCRIPTION:

CACATTATOG CAAGCACTAT TAAGG 25

SEQ ID NO: 7

25

LENGIH: 25

TYPE: nucleic acid

STANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: DNA

SEQUENCE DESCRIPTION:

5 CACTTAGTAG TAGGTGCCAA GATGG 25